TOP SECRET//SI//NOFORN

FIGURE 1

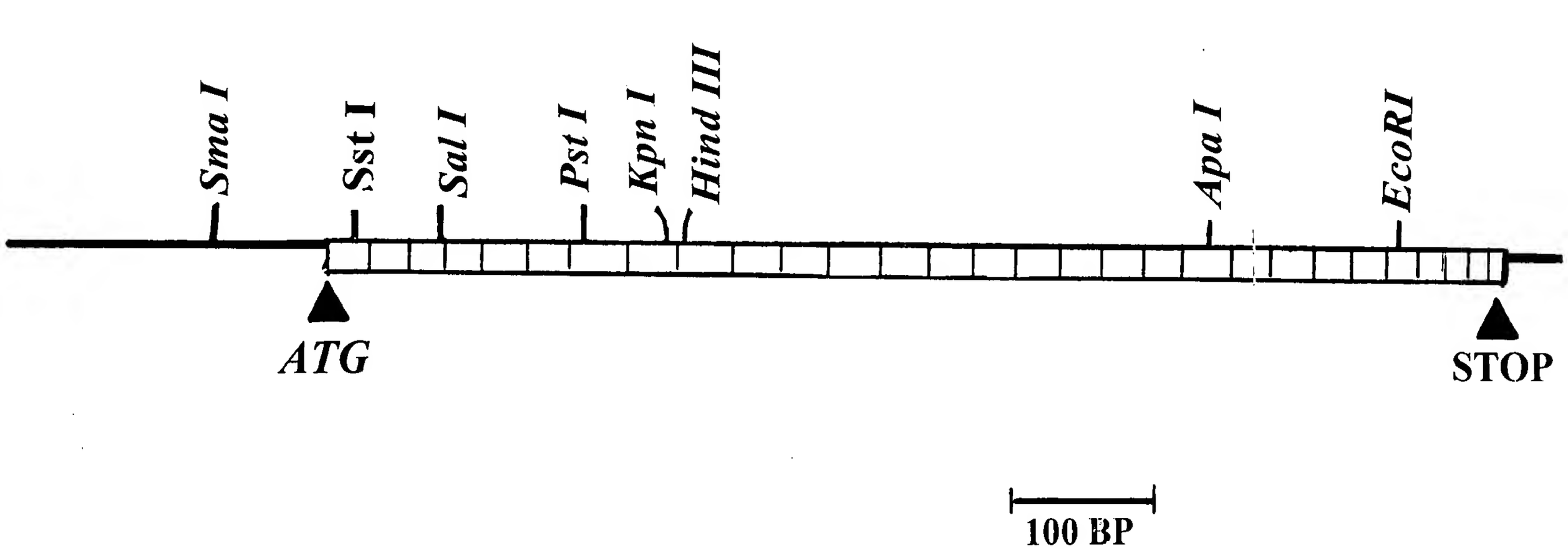


FIGURE 2

```
Met  Asp  Ile  Leu  Cys  Glu  Glu  Asn  Thr  Ser
A T G G A T A T T C T T G T G A A G A A A A T A C T T C T
                10                   20                   30

Leu  Ser  Ser  Thr  Thr  Asn  Ser  Leu  Met  Gln
T T G A G C T C A A C T A C G A A C T C C C T A A T G C A A
                40                   50                   60

Leu  Asn  Asp  Asp  Thr  Arg  Leu  Tyr  Ser  Asn
T T A A A T G A T G A C A C C A G G C T C T A C A G T A A T
                70                   80                   90

Asp  Phe  Asn  Ser  Gly  Glu  Ala  Asn  Thr  Ser
G A C T T T A A C T C C G G A G A A G C T A A C A C T T C T
                100                  110                  120

Asp  Ala  Phe  Asn  Trp  Thr  Val  Asp  Ser  Glu
G A T G C A T T T A A C T G G A C A G T C G A C T C T G A A
                130                  140                  150

Asn  Arg  Thr  Asn  Leu  Ser  Cys  Glu  Gly  Cys
A A T C G A A C C A A C C T T T C C T G T G A A G G G T G C
                160                  170                  180
```

FIGURE 2 (cont.)

Leu Ser Pro Ser Cys Leu Ser Leu Leu His
C T C T C A C C G T C G T G T C T C C T T A C T T C A T
190 200 210

Leu Gln Glu Lys Asn Trp Ser Ala Leu Leu
C T C C A G G A A A A A A A C T G G T C T G C T T T A C T G
220 230 240

Thr Ala Val Val Ile Ile Leu Thr Ile Ala
A C A G C C G T A G T G A T T A T T C T A A C T A T T G C T
250 260 270

Gly Asn Ile Leu Val Ile Met Ala Val Ser
G G A A A C A T A C T C G T C A T C A T G G C A G T G T C C
280 290 300

Leu Glu Lys Lys Leu Gln Asn Ala Thr Asn
C T A G A G A A A A A G C T G C A G A A T G C C A C C A A C
310 320 330

Tyr Phe Leu Met Ser Leu Ala Ile Ala Asp
T A T T T C C T G A T G T C A C T T G C C A T A G C T G A T
340 350 360

Met Leu Leu Gly Phe Leu Val Met Pro Val
A T G C T G C T G G G T T T C C T T G T C A T G C C C G T G
370 380 390

Ser Met Leu Thr Ile Leu Tyr Gly Tyr Arg
T C C A T G T T A A C C A T C C T G T A T G G G T A C C G G
400 410 420

FIGURE 2 (cont.)

Trp Pro Leu Pro Ser Lys Leu Cys Ala Val
T G G C C T C T G C C G A G C A A G C T T T G T G C A G T C
430 440 450

Trp Ile Tyr Leu Asp Val Leu Phe Ser Thr
T G G A T T T A C C T G G A C G T G C T C T T C T C C A C G
460 470 480

Ala Ser Ile Met His Leu Cys Ala Ile Ser
G C C T C C A T C A T G C A C C T C T G C G C C A T C T C G
490 500 510

Leu Asp Arg Tyr Val Ala Ile Gln Asn Pro
C T G G A C C G C T A C G T C G C C A T C C A G A A T C C C
520 530 540

Ile His His Ser Arg Phe Asn Ser Arg Thr
A T C C A C C A C A G C C G C T T C A A C T C C A G A A C T
550 560 570

Lys Ala Phe Leu Lys Ile Ile Ala Val Trp
A A G G C A T T T C T G A A A T C A T T G C T G T T T G G
580 590 600

Thr Ile Ser Val Gly Ile Ser Met Pro Ile
A C C A T A T C A G T A G G T A T A T C C A T G C C A A T A
610 620 630

Pro Val Phe Gly Leu Gln Asp Asp Ser Lys
C C A G T C T T T G G G C T A C A G G A C G A T T C G A A G
640 650 660

FIGURE 2 (cont.)

Val Phe Lys Glu Gly Ser Cys Leu Leu Ala
G T C T T T A A G G A G G G G A G T T G C T T A C T T G C C
670 680 690

Asp Asp Asn Phe Val Leu Ile Gly Ser Phe
G A T G A T A A C T T T G T C C T G A T C G G C T C T T T T
700 710 720

Val Ser Phe Phe Ile Pro Leu Thr Ile Met
G T G T C A T T T T T C A T T C C C T T A A C C A T C A T G
730 740 750

Val Ile Thr Tyr Phe Leu Thr Ile Lys Ser
G T G A T C A C C T A C T T T C T A A C T A T C A A G T C A
760 770 780

Leu Gln Lys Glu Ala Thr Leu Cys Val Ser
C T C C A G A A A G A A G C T A C T T T G T G T G T A A G T
790 800 810

Asp Leu Gly Thr Arg Ala Lys Leu Ala Ser
G A T C T T G G C A C A C G G G C C A A A T T A G C T T C T
820 830 840

Phe Ser Phe Leu Pro Gln Ser Ser Leu Ser
T T C A G C T T C C T C C C T C A G A G T T C T T T G T C T
850 860 870

Ser Glu Lys Leu Phe Gln Arg Ser Ile His
T C A G A A A A G C T C T T C C A G C G G T C G A T C C A T
880 890 900

FIGURE 2 (cont.)

Arg Glu Pro Gly Ser Tyr Thr Gly Arg Arg
A G G G A G C C A G G G T C C T A C A C A G G C A G G A G G
910 920 930

Thr Met Gln Ser Ile Ser Asn Glu Gln Lys
A C T A T G C A G T C C A T C A G C A A T G A G C A A A A G
940 950 960

Ala Cys Lys Val Leu Gly Ile Val Phe Phe
G C A T G C A A G G T G C T G G G C A T C G T C T T C T T C
970 980 990

Leu Phe Val Val Met Trp Cys Pro Phe Phe
C T G T T T G T G G T G A T G T G G T G C C C T T T C T T C
1000 1010 1020

Ile Thr Asn Ile Met Ala Val Ile Cys Lys
A T C A C A A A C A T C A T G G C C G T C A T C T G C A A A
1030 1040 1050

Glu Ser Cys Asn Glu Asp Val Ile Gly Ala
G A G T C C T G C A A T G A G G A T G T C A T T G G G G C C
1060 1070 1080

Leu Leu Asn Val Phe Val Trp Ile Gly Tyr
C T G C T C A A T G T G T T T G T T T G G A T C G G T T A T
1090 1100 1110

Leu Ser Ser Ala Val Asn Pro Leu Val Tyr
C T C T C T T C A G C A G T C A A C C C A C T A G T C T A C
1120 1130 1140

FIGURE 2 (cont.)

Thr Leu Phe Asn Lys Thr Tyr Arg Ser Ala
A C A C T G T T C A A C A A G A C C T A T A G G T C A G C C
1150 1160 1170

Phe Ser Arg Tyr Ile Gln Cys Gln Tyr Lys
T T T T C A C G G T A T A T T C A G T G T C A G T A C A A G
1180 1190 1200

Glu Asn Lys Lys Pro Leu Gln Leu Ile Leu
G A A A A C A A A A A A C C A T T G C A G T T A A T T T T A
1210 1220 1230

Val Asn Thr Ile Pro Ala Leu Ala Tyr Lys
G T G A A C A C A A T A C C G G C T T T G G C C T A C A A G
1240 1250 1260

Ser Ser Gln Leu Gln Met Gly Gln Lys Lys
T C T A G C C A A C T T C A A A T G G G A C A A A A A A A G
1270 1280 1290

Asn Ser Lys Gln Asp Ala Lys Thr Thr Asp
A A T T C A A A G C A A G A T G C C A A G A C A A C A G A T
1300 1310 1320

Asn Asp Cys Ser Met Val Ala Leu Gly Lys
A A T G A C T G C T C A A T G G T T G C T C T A G G A A A G
1330 1340 1350

Gln His Ser Glu Glu Ala Ser Lys Asp Asn
C A G C A T T C T G A A G A G G C T T C T A A A G A C A A T
1360 1370 1380

FIGURE 2 (cont.)

```
 Ser   Asp   Gly   Val   Asn   Glu   Lys   Val   Ser   Cys
A G C G A C G G A G T G A A T G A A A A G G T G A G C T G T
                1390                1400                1410

 Val   ***   ***   Ala   Ser   Cys   Arg   Gly   Asn   Cys
G T G T G A T A G G C T A G T T G C C G T G G C A A C T G T
                1420                1430                1440

G G A A G G C A C A C T G A G C A A G T T T T C A C C T A T
                1450                1460                1470

C T G G T T T T T T T T G
                1480
```

FIGURE 3

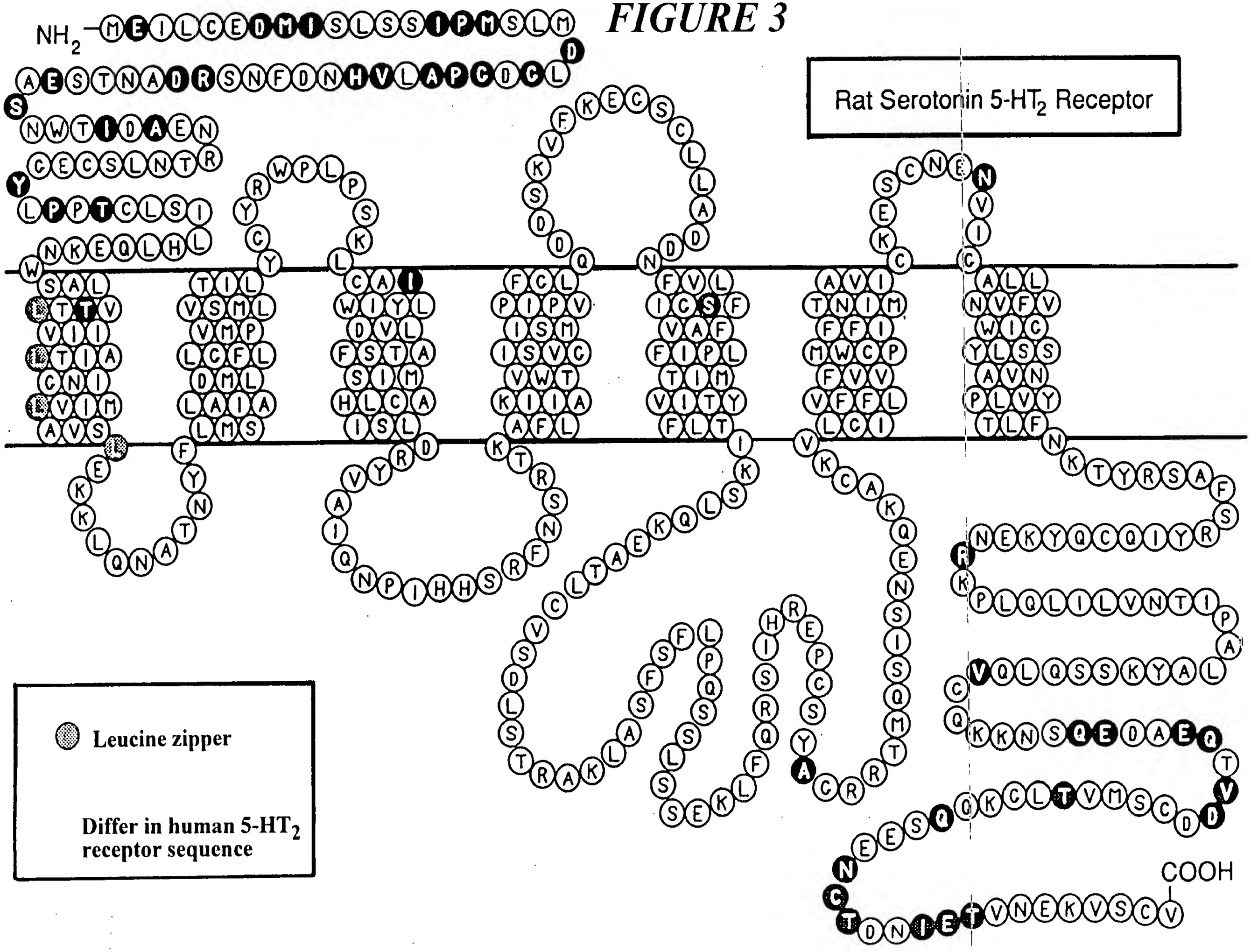
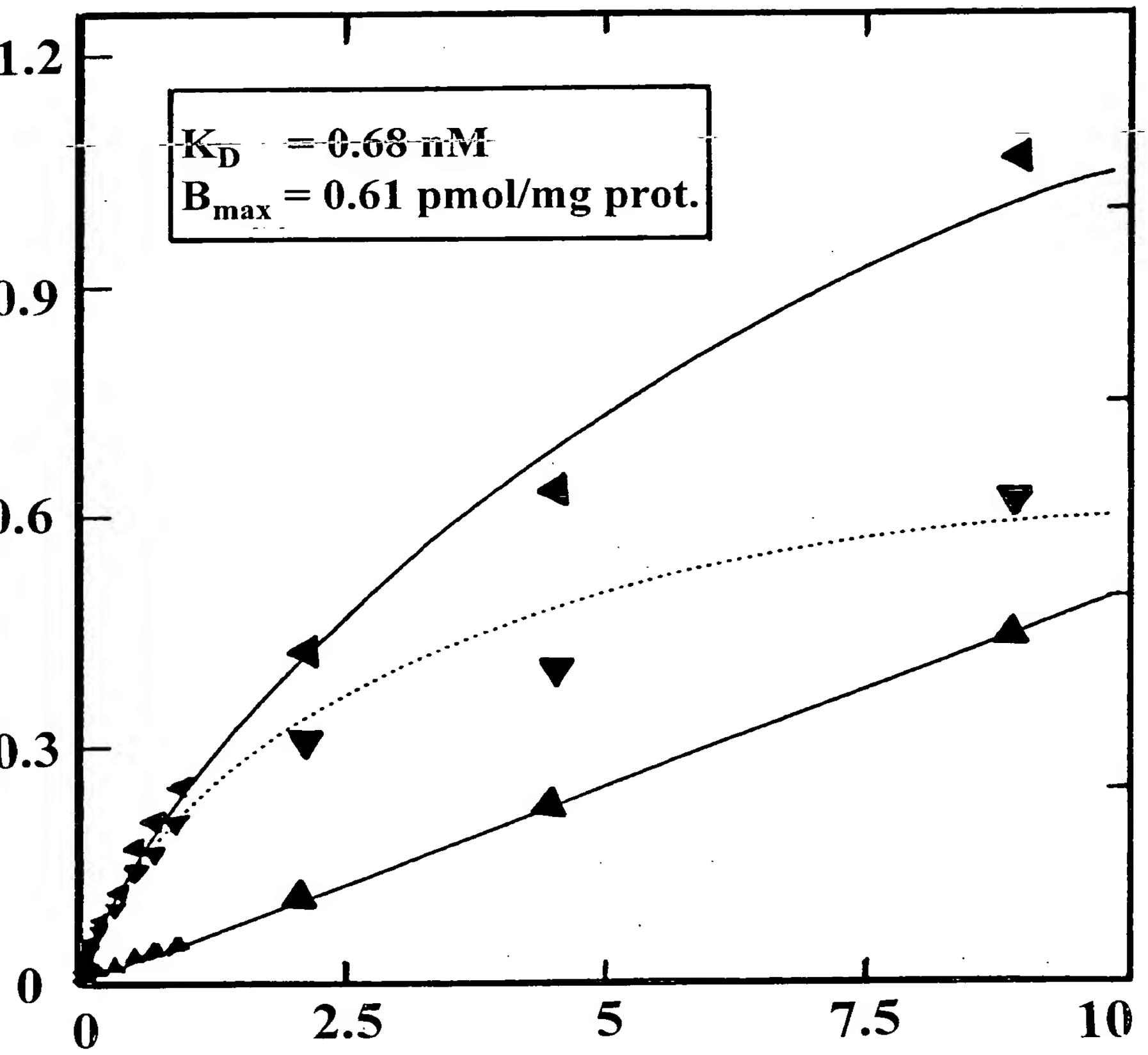

Rat Serotonin 5-HT2 Receptor
NH2
COOH
Leucine zipper
Differ in human 5-HT2 receptor sequence

FIGURE 4


K_D = 0.68 nM
B_{max} = 0.61 pmol/mg prot.
Pmols/mg protein
0
0.3
0.6
0.9
1.2
0
2.5
5
7.5
10
^{3}H-KETANSERIN (nM)